Sopheon Accolade®

Process Design - Reference Table Design Training Guide

Version: 15.2

About Sopheon Accolade®

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About the Accolade Education Program

This module is part of the Sopheon Accolade Education Program (AEP). The AEP modules are designed to help Accolade users perform the tasks in their company's business process using the Accolade application. The content in the modules is meant to be used side-by-side with the application, and is part of the overall documentation suite provided for Accolade.

The benefits of using Accolade as part of your company's innovation development process include the following:

- Reduced cycle time by displaying clear structure and visibility.
- Reduced rework through timely, properly sequenced completion of all key tasks and milestones.
- Assured positive user experience through properly developed product requirements.
- Improved communication by automating collaboration between multifunctional team members.
- Provided decision-making information. Poor projects are stopped or placed on hold so resources can be redirected to more promising and higher value projects and products.
- Provided clear project requirements. Expectations of a project team and project manager at each stage are clearly spelled out.
- Managed business risk. Break resource commitments into increments or stages.
- Established key baseline information and metrics.

The Accolade documentation suite contains the following additional components:

Document	Contents
Sopheon Accolade What's New in This Release	For each release, review this document for an overview of the new features and changes within the release.
Accolade Online Help	Accessible directly through Accolade, the online Help provides comprehensive how-to and reference information about all aspects of using Accolade.
Sopheon Accolade Administrator's Guide	Provides information for administrative professionals regarding Accolade setup. This information is also provided in the online Help.
Sopheon Accolade Installation Guide	Provides information about the installation of the application and its required databases.
Dashboards for Accolade Installation Guide	Provides installation information for installing the Dashboards for Accolade component.
Quick Reference Cards	A PDF that can be printed double-sided that provides quick tips and navigation information for using Accolade.

Document	Contents
Online Help for Accolade Add-ins	Accolade add-ins, including Accolade Office Extensions, Accolade SmartDocuments for Google, Accolade SmartDocuments for Office, Accolade Portfolio Optimizer, and Accolade's integration with Microsoft Project, each include their own Sopheon created Help file accessible directly from the application after the add-in is installed. Each Help file describes how to use the features of that particular add-in.

Prerequisites for Using this Module

The contents of this training module assumes you are assigned the Accolade user roles and have a basic understanding of the terms and concepts listed below and how they are used in your installation. In addition, the content in the related training modules listed below may be helpful before reviewing the contents of this module.

Accolade User Roles

- Process Designer

Terms and Concepts

- Access Groups
- User Accounts
- Service Account
- Reports

Related Training Modules

- Process Design Overview

In addition, the content of this training module assumes that you have one or more users with the Reference Table Manager user role defined in your system.

Reference Tables Overview

Reference tables make a variety of reference information available to users through reports and in documents for use as deliverables and activities. Reference tables are also used to import data, such as resources and project links into Accolade. Reference tables not only contain standard reference information, such as cost tables and specification sheets, but can contain currency conversion rates, strategic corporate targets or limits, and even custom terms that you might want to expose in documents using the REFTABLE field code.

Administrators and Process Designers upload the initial version of a table to Accolade and assign an owner to the table. The owner maintains the table and updates it as necessary. Later versions of tables can be uploaded manually or automatically. Most reference tables are spreadsheet files either created manually using the Accolade Office Extensions add-in, or using online reports. Accolade also supports uploading reference tables in CSV and XML files, both manually and automatically.

Using reference tables, you can:

- **Import data into Accolade** - Use a set of paired reference tables to import large amounts of data into Accolade. Specifically, you can use named pairs of reference tables to import resources, pools, capacities, and demands; projects and project links; matrices; metric security; and security list information. See the Import and Export Data Overview in the online Help for more information.
- **Maintain currency conversions** - Create a reference table that contains the date-specific exchange rates for the currencies your company uses. As exchange rates change, the reference table manager can add additional rows to subsequent versions of the table while still preserving the exchange rates for prior dates. See the Defining the Currencies Used in Your Company in the online Help for more information.
- **Include data in deliverables and activities** - Display individual reference table values in deliverables or activities using Accolade field codes with the REFTABLE source. To display correctly, these tables must have unique values in each row of the first column of the table so that the row can be identified in the code. In addition, it is possible to display an entire reference table in a deliverable or activity.

Reference Table Security

Each reference table is added to an access group so it uses that access group's security. Like security for projects, security for reference tables affects the data that displays in reports and what displays in Search results:

- Users can only refresh a report containing a reference table if they have the rights to the table.
- Users can only see the content of reference table field code if they have access rights to the table.

The access group security does not extend to the creation and ownership of a reference table. It is possible for a Reference Table Managers to be assigned to tables that they do not have access rights to, although this would usually be poor practice as the manager could not view table contents in reports.

If automatic uploading of reference table versions is enabled, the security of the ultimate source of the new versions must be configured outside of Accolade, by controlling which users have access to the local and remote file locations used for upload.

Requirements and Considerations for Reference Tables

Anyone in your organization can create a reference table. Users with full Reporting Rights can use the Accolade Office Extensions add-in and online reports to create the table automatically with the correct placement in a worksheet. You can also create tables manually. After a table is created, Administrators and Process Designers add the table definition to Accolade and upload the file.

Accolade supports reference tables as spreadsheet, CSV, and XML files through the Reference Tables page, and through an auto-loader service. The information and examples provided are in spreadsheet format.

Reference Table Requirements

A table within a workbook must meet the following requirements to be used as a reference table in Accolade:

Component	Requirements and Considerations
Size and Location	• Have at least one column and two rows. • Must start in cell A1 in the worksheet. • The first blank cell in the top row determines the right edge of the table. • The first blank cell in the left most column determines the bottom of the table.
Column Headings	• Must be in the first row in the worksheet; therefore, the first column heading is in cell A1. • Can be named anything, and the name is used as the column's display name within Accolade. Any characters other than letters, numbers, and underscore, and any numbers before the first letter are removed to create the column's system name. • Must be unique within the table, and are case insensitive.
Data	• Starts in the second row in the worksheet, directly under the column headings. • Is either a number, date, or string. Accolade recognizes

Component	Requirements and Considerations
	three types of data in table columns: number, date, and string. Accolade determines the data type of each column using the initial contents of the column when the table is uploaded for the first time. To force a column containing only numbers or only dates to be defined as string type, add a letter in at least one row of the column in the initial upload. You can delete the letter from the next version, but the data type remains "string". • All dates are in mm/dd/yyyy format. • The decimal separator in numbers must be a period (.).
Accolade Field Codes	To make the table's values display using Accolade field codes, for example in documents or calculated metrics, every value in the table's leftmost column must meet the following criteria: • Be unique (case insensitive) in the column. • Begin with a letter. • Contain only letters and numbers. • Contain no more than 16 characters. In addition, the **Unique values in first column** check box must be selected on the Reference Table page when the table is added in Accolade.

Reference Table Limitations

Reference tables contain the following limitations:

- There can be only one reference table per workbook. You can create templates and documents using the Accolade Office Extensions add-in. However, when building a reference table, the spreadsheet file can have only one table that is considered a reference table.
- Versions after the first can have more columns than the first version, but cannot contain fewer columns.
- Each cell in the table has a 500 character limit.
- The broken bar (¦) character is prohibited. Use the pipe (|) characters instead. Many keyboards contain a key that displays a broken bar but that actually inserts a pipe.

Identifying the Worksheet that Contains the Reference Table

The reference table must exist on what is considered to be the first worksheet. In a file where the worksheets have been renamed, rearranged, or hidden, and it is no longer which worksheet is the first, create a custom document property called **SGM_RefTableSheet** and enter the name of the worksheet that contains the reference table as the custom property's value. Refer to Microsoft's online Help for information about adding custom properties to files.

Adding Reference Tables

Anyone in your organization can create a reference table. However, only Administrators or Process Designers can add the first version of a reference table to Accolade. After a reference table is added to Accolade, its table owner can then upload later versions and set it for automatic upload to maintain the contents of the table.

To add a reference table to Accolade:

1. From the **System** menu, select **Content Sources > Reference Tables**.

   To narrow the reference table list, search by the table name, system name, or category.

2. Do one of the following:
   - **To add a new reference table** - Click **Add New** in the upper right corner of the page.
   - **To edit the details of an existing reference table** - Click the name of the reference table to open it for editing.

3. Complete the following information to identify and describe the content of the reference table:

   Important! Reference tables used for project data or resources imports have unique naming requirements.

   Required fields display with **red** text and an asterisk * if the field is empty.

Field	Description
Name	Enter a unique name, up to 80 characters long, which identifies the reference table.
System Name	Enter a unique name that identifies the table in reporting views, reports created using the Accolade Office Extensions add-in, field codes, and other places in Accolade. The name must be unique among reference tables and can contain only letters (English alphabet), numbers, and the underscore.
Description	Enter a description of the purpose or nature of the reference table. This description helps other users identify the reference table throughout the system.
Category	Enter or select the group to which this reference table belongs. Use categories to organize like tables together. For example, you may choose to group all the reference tables used to import data into the same category, in order to separate them from tables that provide additional reference information for users. • Leave this field blank to add to the **Default** category. • To define a new category, select **New Category** and enter the category name. • To delete a category, remove every item from the category. Empty

Field	Description
	categories are deleted automatically.
Owner	Click and select the user that owns updating the details and versions of this table. To filter the list of users, enter one or more search criteria to filter by name, login name, email address, function, or extended field. • Clicking **Select current user** will assign the role to the current user (if they have the appropriate rights). • Selecting a **Function** in the drop-down will display available users that are assigned to the function. The current selection defaults to the function to which you are assigning a user, however depending on the project configuration, you can assign any user. • Clicking the **Show advanced filters** check box displays or hides the additional filter options. • Clicking **Clear** removes the current user assignment and displays **[None]** to indicate that no user is assigned. Table owners maintain the content of the reference table after its initial upload. **Note:** Only users with the Reference Table Manager user role are available to select as table owners.
Configuration Access Groups	Select the access group to which the reference table setup belongs. A user must be assigned to the same access group as the reference table to edit details such as the name, system name, etc. **Note:** Only **Owners** are able to upload new versions of files.
Access Group	Select the access group to which the reference table content is available to. A user must be assigned to the same access group as the reference table to see the table and use the data within it. • To make the table and its contents available to all users, select **[None] - Accessible by all users**. • Select **[None] - Accessible by all users** when adding the currency reference table. **Note:** Administrators and Process Designers can create reference tables that are outside their access group rights; however they cannot see or modify the tables after creation.

4. In the **File** field, click and select the spreadsheet, CSV, or XML file that contains the reference table.

The columns from the table in the uploaded file are loaded and display in the Column Definitions section of the page.

Column data types are automatically determined based on the reference table information included in the initial upload, either when adding a new reference table or when adding a new version with new columns to an existing table. If desired, **Number** and **Date** data types for new columns can be changed by clicking on the Data Type drop-down and selecting **String**. Once the columns have been added and you click **Create** or **Apply**, existing data types are not able to be changed in later versions of the table.

5. Select the **Unique Values in First Column** check box if the table contains unique values in each row of the table's leftmost column. Selecting this option allows cell values to display using using Accolade field codes and to reference a cell in the table in calculated metrics.

   Note: If selected, you cannot change this setting in later versions of the table.

6. Complete the information about version limits and how the file is updated to Accolade.

Field	Description
Versioning	Select how many versions of the table to save in the database. If you enter a maximum number instead of selecting **Unlimited**, older versions of the table are discarded as newer versions are added. Sopheon recommends adding no more than 250 versions of a single reference table.
Loading Schedule	If you want to enable automatic loading of new versions of the document through either a directory on the application server or an FTP website, select an option to upload a version immediately or at a scheduled time each day. • **Load immediately** - Loads any files placed in the drop box folder on the application server immediately. • **Daily at** - Loads any files placed in the drop box folder on the application server at the time you specify. Note that this field is in 24-hour time. To upload all files at 10:00 pm, enter **22:00**. The time entered is the time in the application server's time zone, which may be different than the time zone you are in when entering the time in Accolade. If the reference table is assigned to an access group, the user assigned the Service Account user role must be assigned the same access group for the reference table to automatically upload.

Field	Description
	If you are creating reference tables for data import and the imports are large, schedule them to run overnight. Reference tables for information such as currency exchanges are smaller and can load immediately. If you do not want to enable automatic loading for the reference table, select **Off**.

7. Select one or more of the "Available to" options to make the contents of the table available to other portions of Accolade.

Field	Description
Available to Metrics	Select this check box to make the content within the table available for use in metrics, for example, when defining list values or to use in creating cascading list or calculated metrics.
Available to Portfolio Optimizer	Select this check box to make the content within the table available to Accolade Portfolio Optimizer, for example, for strategic bucket charts or calculated metrics tables.
Available to Reporting	Select this check box to allow the reference table to be used in reports created in Accolade Online Reporting or reports created using the Accolade Office Extensions add-in. For example, select this check box for reference tables that contain information that is valuable to report and track for historical purposes, such as those used for currencies or target information. A reference table must also be added to Accolade as an online report in order to be available to use in reporting. The reference table information is included by selecting the **Reference Tables** option when selecting columns to be included in the report. See the Creating Online Reports within Accolade topic in the online Help for more information. Clear this check box for reference tables used for importing data into Accolade or for tables that hold values for configuration, such as cascading list metric values.

8. Click **Create** to create the new reference table or **Apply** to save your changes to an existing table.
9. Review and update the column definitions to provide additional information about the columns in the reference table.

Field	Description
Display Name	*Read-only* The display name, based on the column headings from the uploaded file.
System Name	Confirm or modify the system name for each column. Column system names must begin with a letter and contain only letters, numbers, and the underscore character. They can be abbreviated to make them easier to use in queries, reports, and Accolade fields.
Data Type	*Read-only* The data type for the column.
Number Format	For columns that contain number metrics, enter a custom number format to use when data in Number type columns is displayed in Smart documents. See the Custom Format for Number Metrics topic in the online Help for more information.

10. Click **Apply** to save your changes.

Notes:

- To add version notes to a reference table, display the reference table details. In the **Versions of the Reference Table** section of the table, click in the reference table's Comments section to add comments, and click **Apply** to save your changes.
- To delete a version of a reference table, display the reference table details. In the **Versions of this Reference Table** section of the table, click ⊗ for the version that you wish to delete and click **Apply** to save your changes. You cannot delete all versions of a reference table.
- To delete a reference table, display the reference table details and click **Delete** in the lower left corner of the page. Reference tables that are used in list metric definitions cannot be deleted until the metric no longer references the table.

Exercises - Adding Reference Tables to Accolade

Try out what you have learned!

- Create a spreadsheet file that contains a single worksheet.
- Add a simple table that starts in cell A1, and add at least one row of data to the table.
- Save the spreadsheet as a reference table to Accolade and assign it a table owner.

Adding Reference Table Values to Documents

You can create templates for deliverables, activities, gate documents, and reports that contain values or the entire table from reference tables available within Accolade. Embedding references to reference tables allows you to pull additional data into templates, while updating the values in only the reference table. The values in the template update with the current reference table value when users download the template or document version and refresh the data.

You can add reference table values using the Accolade Office Extensions add-in, or using Accolade field codes. You can also add a reference table in its entirety using a specially named worksheet within a spreadsheet file.

Note: Anyone in your organization can create a template that includes an embedded reference table, if they have access to the reference table itself. However, only Administrators and Process Designers with the Template Access user role can add templates to the Template Library, which is the repository for templates available within Accolade.

To add entire reference tables using specially named worksheets:

To include an entire reference table, you need to know the reference table's system name as set in Accolade.

1. Open the spreadsheet and save the file to a convenient location on your computer using a file name that clearly identifies the purpose of the document.
2. Rename the worksheet containing the reference table as **SGM_RT_<*system name*>**, where <*system name*> is the system name of the reference table to display.

   You can either hide the worksheet containing the reference table, or show it and add other content to it. Note that the reference table's top left cell starts in cell A1. If you add content outside the table's cell range, that content could be overwritten if later versions of the table are larger. Accolade fields added to the worksheet are also refreshed.
3. Save the file to Accolade or add the file to the Template Library as a **Process Document** type.

To add a reference table cell value using Accolade field codes:

1. Open the document and save the file to a convenient location on your computer using a file name that clearly identifies the purpose of the document.
2. Where needed, add the Accolade field code that points to the reference table and column you want to include:

   {*REFTABLE:<*TableSystemName*> #RowID=(row ID) #ColumnID=<*ColumnSystemName*>*}

Example

{*REFTABLE:sgm_currency #RowID=USD #ColumnID=CurrencyName*}

Displays the value in the USD row of the CurrencyName column of the Currency reference table.

Maintaining Reference Table Information

The owner of a reference table can add versions of reference tables they own, including changing values in the data rows, adding and removing data rows, updating columns headings, and adding new columns to the right side of the table.

> **Note:** A user with the Reference Table Manager user role must be assigned as the owner of the table to maintain it and add new versions.

Reference table versions must contain:

- The same or more columns than the existing version. They cannot contain fewer columns.

  Avoid inserting columns to the left of any existing columns. Doing so creates a disconnect between the column display names and system names. While the name disconnect can be corrected on the Reference Table Columns page, inserting a column can also create a disconnect between the data type of the columns and their contents. If you need to insert a column, it is best to delete the table and recreate it.

- The same system name and value in the first column.

  Changing a column's system name or a value in the first column might break field code references to this table's values are used in existing documents. If you must make such changes, you should make the corresponding changes in REFTABLE field codes in all document templates.

- The same data type in existing columns.

To add a new reference table version:

1. From the **System** menu, select **Content Sources > Reference Tables**.
2. Click the name of the reference table you want create a version for.
3. In the **Versions of this Reference Table** section, click the icon next to the version you want to use as a base for the new version.
4. Modify the reference table as necessary and save the file to your computer.
5. In the **Versions of this Reference Table** section, click **Add New**, and select the saved file.
6. In the New Version dialog:
   - Confirm or modify the column system names.
   - Confirm or modify the new column data types.
   - Enter the number formats of number type columns.
7. Click **Add New Version** to save your changes.

Notes:

- To add version notes to a reference table, display the reference table details. In the **Versions of the Reference Table** section of the table, click in the reference table's Comments section to add comments, and click **Apply** to save your changes.
- To delete a version of a reference table, display the reference table details. In the **Versions of this Reference Table** section of the table, click ⊗ for the version that you wish to delete and click **Apply** to save your changes. You cannot delete all versions of a reference table.
- In addition to updating reference tables using the method described above, reference tables can also be updated using automatic loading. Contact your Accolade Administrator for information about where to save the version to upload it automatically.

Enabling Automatic File Upload

You can configure Accolade to automatically upload reference table versions and related documents when new files are placed in a designated directory.

To enable automatic upload, Administrators must first complete the following:

- Configure the upload directory.
- Setup the Autoloader Service User and define the upload directories in Accolade.

After the location and service user are created:

- Process Designers and reference table owners can enable individual reference tables for automatic uploading.
- Project Importers can setup the related documents upload and schedule the upload to run.

Configure the Upload Directory Location

Administrators must create a folder that acts as the drop box location. On the application server, create or identify the following directories:

- The input directory to use as the drop box location. For reference tables, this can be a network directory or an FTP site. For related documents, this can only be a network directory.
- The output directory used to store service error messages and logs.

These can be the same folder.

Set Up the Autoloader Service User and Autoloader Service

The Accolade Autoloader Service requires a user account to upload new document versions or reference tables to Accolade, and can be used for importing project and resource data. Create the user account for the autoloader service in Accolade and assign it the following roles and access groups:

- Service Account user role. This is automatically assigned when the user is created.
- Project Importer user role, which is automatically assigned when the user is created. This user role is only a requirement when importing project or resource data.
- Appropriate Access Groups with access permission selected. This is only a requirement if loading Reference Tables that contain a specified Access Group.

After setting the user as the autoloader service account (on the server), the user is automatically granted the **Logon as a Service** right.

Important! If you created the Accolade database login using Windows Authentication, you must add the user login to the database after adding the user to the Autoloader Service. Follow the instructions outlined in the Accolade Installation Guide to create the Accolade database login and add users.

To ensure that reference tables assigned to a specific access group are uploaded successfully when enabled for automatic upload, assign the user with the System Service user role in Accolade access to all access groups defined in the system.

In addition, Accolade needs to know the directory or FTP location it should look in for new files to upload.

To setup the Autoloader Service User on the application server:

1. On the application server, from the **Start** menu, select **Administrative Tools > Local Security Policy**.
2. Open the **Local Policies** folder and open the **User Rights Assignment** folder.
3. Right-click the **Log on as a service policy** and select **Properties**.
4. In the **Local Security Setting** tab, add a service user for the upgrade service.
5. Click **OK** to save your changes.

   After you have defined the service user on the application server, configure the Accolade Autoloader Service in the Accolade Administration Console. Additionally, after setting up the autoloader service user, add the user login to the database if you created the Accolade login using Windows Authentication.

To configure the Autoloader Service:

1. In the Accolade Administration Console, select **Autoloader Configuration** in the Navigation pane.
2. In the **Service Account User** field, add the service account user you created above and enter its password.

   This user is added to Accolade as a user with the Service Account user role.
3. Select the **Enabled Service** check box and enter a **Retry Delay on Error** time period in milliseconds to set the retry rate if the service encounters errors.

4. In the **File Locations** section, enter the input (the location with files to upload) and output (the place Accolade saves any log files regarding the upload) locations for the directory or FTP site in the fields appropriate for your setup.

   Accolade supports both FTP and FTPs for file uploads. However, if you are using the Autoloader Service for related documents uploads, designate a directory location.

5. Click **Apply** to save your changes.

To modify the Autoloader Service in a load balance environment:

> **Note:** Reference the *Accolade Installation Guide* for information on setting up load balance environments.

1. Stop any running Autoloader Windows Service instances on all load balanced servers.
2. Make the same change on each load balance server on the Autoloader Configuration page on the Administration Console.
3. Re-enable any previously active Autoloader Windows Service instances on all load balanced servers.

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